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#### TRIACETIN ESTROBOND B

Two MLF with CA filter additive triacetin Bayer containing 0.8 and 1.9 % of the ESTROBOND B additive glycerol-propionate-diacetate (isomer mixture) (1) were tested against commercial Swiss MLF in panel B. The results obtained are promising. In two panel tests the MLF containing 1.9 % additive was found, by the majority of the panel group, to have more Marlboro characteristic than the commercial MLF (2). Further tests are in preparation (3).

#### AMINO ACID ANALYSIS

The determination of amino acids in two PM-Richmond micro-samples (10 mg) of lyophilized smoke condensate (4) was completed (5). Due to the small size of the samples and the low amino acid concentration found in a first trial, the applicability of our routine method (determination and hydrolysis steps) to micro-samples had to be tested

Micro-samples (4 mg and 40 mg) of pure lysozyme protein of known amino acid profile were hydrolyzed in 2 ml of hydrochloric acid under conditions applied for routine determinations (6 N HCl, 110°, 48 h) and the individual amino acids analyzed (6). The results are summarized in table 1 and compared with values reported in the literature.

Judging by the results, the method works quite well even with very small protein samples.

**Table 1** Amino Acid Composition of Lysozyme Protein;  
Comparative Tests.

Amino acid	Number of amino acids per mole of Lysozyme found *)		Theor. values	Values reported in the literature				
	Sample size							
	4 mg	40 mg		a)	a)	a)	b)	c)
Try	-	-	6	4.0	-	-	3.6	-
Lys	6.0	5.8	6	6.9	6.8	7.1	6.1	6.0
His	1.1	1.4	1	1.1	1.1	1.3	0.9	0.9
Arg	10.3	12.7	11	11.8	11.1	10.6	12.0	10.1
Asp	21.4	22.6	21	21.4	18.9	20.3	20.5	21.0
Thr	7.3	6.9	7	6.5	6.8	6.5	6.9	6.2
Ser	9.2	9.5	10	9.2	9.1	8.7	9.6	7.3
Glu	4.9	5.3	5	5.3	5.2	5.2	4.6	4.8
Pro	-	3.4	2	7.2	3.7	3.5	3.2	2.0
Gly	12.9	13.1	12	12.0	12.0	12.0	11.6	12.0
Ala	11.7	12.3	12	12.0	12.3	12.1	11.4	12.0
$\frac{1}{2}$ Cys	-	2.9	8	-	-	-		6.6
Val	5.1	6.8	6	6.1	6.5	6.1	3.8	5.7
Met	-	2.2	2	2.2	2.2	1.9	1.7	1.9
Ile	5.0	5.7	6	6.1	6.1	5.6	4.4	5.8
Leu	7.4	8.5	8	8.1	8.0	7.9	7.7	7.9
Ty	1.5	3.2	3	3.1	3.3	1.2	3.1	2.9
Phe	1.7	3.1	3	2.7	3.3	1.6	3.5	2.8

\*) mean values of three determinations.

a) L.B. James, J. of Chromatogr., 68 (1972) 123-130

b) H. Matsubara, Biochemical and Biophysical Research Communication, 35 (1969) 175-181

c) T.Y. Lui, J. of Biological Chemistry, 246 (1971) 2842-2848.

#### REFERENCES

- (1) E. Lecoultre, PME Research Laboratory, monthly progress report, March 1980.
- (2) Test de degustation panel B, No. N-76, March 21, 1980
- (3) Memo of E. Lecoultre to N. Nyffeler, April 25, 1980
- (4) Memo of J.L. Charles to W. Fink, February 21, 1980
- (5) Memo of W. Fink to J.L. Charles, April 11, 1980
- (6) E. Lecoultre, PME Research Laboratory, monthly progress report, February 1980.

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